NEW SPECIES OF NORTH AMERICAN ACMAEODERAE.

By H. C. FALL, Tyngsboro, Mass.

The making known of a fine new *Acmaeodera*, loaned me for study by Mr. Alan S. Nicolay, of Brooklyn, N. Y., furnishes an opportunity for adding descriptions of four other forms, for some time held in suspicion in my own cabinet, and to which I trust the accumulation of further material will confirm my judgment in giving distinctive names.

Acmaeodera aurora new species.

Length 9.2 mm.; width (across humeri) 3.7 mm.

Form rather stout, not strongly cuneiform. Head, thorax and body beneath aeneous; elytra yellow, the point of the humeral umbo black, the lateral margins reddish for a short distance at apex. Pubescence whitish throughout, conspicuous on the thorax, sparse on the elytra, dense and long at the sides of the body beneath. Clypeus very broadly emarginate. Head and sides of thorax densely punctate, the punctures becoming well separated toward the middle of the thoracic disk; elytra moderately punctate striate, the striae lightly impressed at sides and apex. Prosternum sparsely punctate; ventral segments more finely so at middle; last ventral with evident apical plate, the free edge of which is narrowly rounded.

Jacumba, San Diego Co., California, 12-VIII-17.

Described from a single specimen submitted by Mr. Alan Nicolay, who retains the type.

This species is at once separable from all previously described North American forms by the *a*lmost entirely yellow elytra. The front margin of the prosternum has a strong lobiform tooth each side, which places the species in the "Sinuatae" where it may best precede *recticollis*.

Acmaeodera auritincta new species.

Length 11.5 mm.; width 5 mm.

Form very robust, nearly as in *falli*; the prothorax, as in that species, a little wider at base than the elytra and strongly narrowed in front. Head, thorax and ventral surface golden green, immaculate; elytra intricately varied with green and yellow, the latter color predominating, the green areas with

a golden lustre on the disk, but darker and slightly bluish at the margins. Punctuation of the thorax very dense and nearly uniform throughout; elytral serial punctures coarser than in *falli*; erect hairs of upper surface entirely whitish. Prosternum very feebly trisinuate in front; last ventral with thin free apical plate, its apex sinuato-truncate.

Described from a single specimen bearing label Kent, Culberson Co., Texas, Sept. 17-18, '12, R & H, 3,900-4,200 feet.

While manifestly allied to *falli*, it is difficult to believe that it can be even an extreme form of that species. In *falli* the color is deep blue-green, this color predominating over the yellow on the elytra, the prothorax much less densely punctate, the strial punctures of the elytra coarser, the erect hairs of the upper surface entirely fuscous.

Acmaeodera nexa new species.

Length 7.5 to 8 mm.; width 2.6 to 2.8 mm.

Narrow, feebly cuneiform, black bronzed, polished; erect hairs numerous, predominantly whitish at sides becoming fuscous toward the middle of the disk. Prothorax unspotted; elytra each transversely marked with yellow as follows: two small spots at basal sixth, a narrow external fascia at middle, a still narrower and slightly oblique fascia from margin inward to second stria at about apical third, and two small subapical spots. The two subapical spots may be united, and the oblique fascia before them may be divided into two spots.

The type is from the San Bernardino Mts., California, and bears date "VI-5-16." Other examples are from Mt. Lowe, Mt. Wilson and Camp Baldy, all in the Sierra Madre Mountains in Southern California.

This species is closely related to *angelica*, but is of more slender form as a rule, the markings entirely yellow (the two posterior marginal spots reddish in one example) and the last ventral merely depressed around the edge without evident double margin at tip.

Acmaeodera liberta new species.

Length 7.2 to 9 mm.; width 2.5 to 3.3 mm.

Depressed, rather strongly cuneiform; black, scarcely or feebly bronzed. Of the *labyrinthica-cuneata* type, the form

nearly as strongly attenuate as in *cuneata* but with more limited and isolated maculation which seems to separate it quite definitely from either of these species, in both of which the markings are much more profuse and always more or less longitudinally coalescent. The markings in *liberta* consist of two longitudinal series of small yellow spots, one marginal and submarginal, the other discal, of which the pair at the middle unite to form a short somewhat oblique fascia. The last ventral has a thin apical plate, the free edge of which is broadly evenly rounded.

Described from six examples, the type and two others collected by Dr. Fenyes at Independence, California; the others from "Arizona" from the Wm. T. Davis collection. The species may best follow *cuneata* in a cabinet arrangement.

Acmaeodera tenebricosa new species.

Length 6.3 to 8 mm.; width 2.2 to 2.7 mm.

Very similar in nearly all respects to *dolorosa*, from which it differs as follows: The form is rather less depressed, the prothorax less rounded before the base and even more densely punctate, the punctures being virtually in mutual contact throughout. The ventral surface is slightly less closely punctate and the terminal segment entirely lacks the more or less angulate apical plate or crest which is quite evident in all specimens of *dolorosa* seen.

Described from five examples, of which four, including the type, were taken at Havilah, Kern Co., California, VI-6-13, by Mr. G. R. Pilate. The fifth example was captured at Bear Lake, California, 6-15-17, by Mr. J. O. Martin.

Tenebricosa should precede dolorosa in a cabinet arrangement.

Papilio ajax in New York.—A recent visit to a large paw-paw grove near Brockport, N. Y., resulted in the taking of several imagos, larvae and one pupa of *Papilio ajax* (Linn.). The existence of this southern swallowtail as a permanent resident in this section may be of interest to some. It has without doubt become settled there as I find a mention of the grove and the presence of *ajax* as early as 1870.—JAMES L. ANGLE, Rochester Municipal Museum.